

Answer on Question #56110 – Math – Algebra

Question

$$10a(2p+q)^3-15b(2b+q)^2+35(2p+q)$$

Solution

$$\begin{aligned}10a(2p+q)^3-15b(2b+q)^2+35(2p+q) &= 5(2p+q)(2a(2p+q)^2+7)-15b(2b+q)^2= \\ &= 5(2p+q)(2a(4p^2+4pq+q^2)+7)-15b(4b^2+4bq+q^2)= 5(2p+q)(8ap^2+8apq+2aq^2+7)-15b(4b^2+4bq+q^2)= \\ &= 5(2p+q)(8ap^2+8apq+2aq^2+7)-15b(4b^2+4bq+q^2)= \\ &= 80ap^3+80ap^2q+20aq^2p+70p+40aqp^2+40apq^2+10aq^3+35q-60b^3+60b^2q-15bq^2\end{aligned}$$